

The burden of high fasting plasma glucose in South American Countries, 1990–2019: an analysis for the Global Burden of Disease Study

Objective: To describe the burden of high fasting plasma glucose (HFPG) in South American countries from 1990 to 2019.

Methods: This ecological study analyzed the burden of HFPG in adults aged 25 years or older in twelve South American countries from 1990 to 2019 using the Global Burden of Disease (GBD) 2019 estimates. A systematic analysis was performed on mortality and morbidity data to estimate years of life lost (YLLs), years lived with disability (YLDs), disability-adjusted life years (DALYs), the summary exposure value (SEV), and deaths per 100,000 population. All estimates were described for both sexes, age-standardized, with 95% uncertainty interval (95%UI).

Results: In 2019, Guyana had the highest rate of YLLs (5,419.6; 95%UI 4,115.1-6,924.2), YLDs (1,212.5; 95%UI 838-1,649.2), DALYs (6,632.1; 95%UI 5,237.1-8,243.3), SEV (23.2; 95%UI 21.1-25.2), and deaths (254.5; 95%UI 193.9-324.1). On the other hand, Peru had the lowest rates of YLLs (746.5; 95%UI 538.6-1,035.4), DALYs (1,143.1; 95%UI 889.2-1,445.9), SEV (7.7; 95%UI 6.6-8.9), and deaths (41.2; 95%UI 29.6-57), whereas Uruguay had the lowest rate of YLDs (357.9; 95%UI 242.4-485.6).

Conclusions: The burden of HFPG is large and growing in South America since 1990 and, in most countries, although heterogeneous, DALYs, YLLs, and deaths decreased, while the SEV and YLDs increased. These changes indicate a shift of the burden from mortality to morbidity and health systems must abide by the added workload.

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Keywords: hyperglycaemia, disability-adjusted life years, South America